

## t30\_jordan

(TMWt4QcUH77YMJ5MsMv7nppCY18ZUyTLrr8)

October 27, 2020

Let  $v2\_struct\_0 : \iota \Rightarrow o$  be given. Let  $v2\_pre\_topc : \iota \Rightarrow o$  be given. Let  $v1\_borsuk\_2 : \iota \Rightarrow o$  be given. Let  $l1\_pre\_topc : \iota \Rightarrow o$  be given. Let  $m1\_pre\_topc : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $u1\_struct\_0 : \iota \Rightarrow \iota$  be given. Let  $m1\_borsuk\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $r1\_tarski : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k2\_relset\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $r1\_borsuk\_6 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $r1\_borsuk\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Assume the following.

$$\begin{aligned}
 & \forall X0.((\neg v2\_struct\_0 X0) \wedge ((v2\_pre\_topc X0) \wedge (l1\_pre\_topc \\
 & X0))) \Rightarrow (\forall X1.((\neg v2\_struct\_0 X1) \wedge (m1\_pre\_topc X1 X0)) \Rightarrow ( \\
 & \forall X2.(m1\_subset\_1 X2 (u1\_struct\_0 X0)) \Rightarrow (\forall X3.(m1\_subset\_1 \\
 & X3 (u1\_struct\_0 X0)) \Rightarrow (\forall X4.(m1\_subset\_1 X4 (u1\_struct\_0 \\
 & X1)) \Rightarrow (\forall X5.(m1\_subset\_1 X5 (u1\_struct\_0 X1)) \Rightarrow (\forall X6. \\
 & (m1\_borsuk\_2 X6 X0 X2 X3) \Rightarrow (((X2 = X4) \wedge ((X3 = X5) \wedge ((r1\_borsuk\_6 X0 \\
 & X2 X3) \wedge (r1\_tarski (k2\_relset\_1 (u1\_struct\_0 X0) X6) (u1\_struct\_0 \\
 & X1)))))) \Rightarrow ((r1\_borsuk\_6 X1 X4 X5) \wedge (m1\_borsuk\_2 X6 X1 X4 X5))))))))) \\
 & \tag{1}
 \end{aligned}$$

Assume the following.

$$\begin{aligned}
 & \forall X0. \forall X1. \forall X2. (((\neg v2\_struct\_0 X0) \wedge ((v2\_pre\_topc \\
 & X0) \wedge (l1\_pre\_topc X0))) \wedge ((m1\_subset\_1 X1 (u1\_struct\_0 X0)) \wedge ( \\
 & m1\_subset\_1 X2 (u1\_struct\_0 X0)))) \Rightarrow ((r1\_borsuk\_6 X0 X1 X2) \Leftrightarrow (r1\_borsuk\_2 \\
 & X0 X1 X2)) \\
 & \tag{2}
 \end{aligned}$$

Assume the following.

$$\begin{aligned}
 & \forall X0. (l1\_pre\_topc X0) \Rightarrow ((v1\_borsuk\_2 X0) \Leftrightarrow (\forall X1. ( \\
 & m1\_subset\_1 X1 (u1\_struct\_0 X0)) \Rightarrow (\forall X2. (m1\_subset\_1 X2 \\
 & (u1\_struct\_0 X0)) \Rightarrow (r1\_borsuk\_2 X0 X1 X2)))) \\
 & \tag{3}
 \end{aligned}$$

**Theorem 1**

$$\begin{aligned} & \forall X0.((\neg v2\_struct\_0 X0) \wedge ((v2\_pre\_topc X0) \wedge ((v1\_borsuk\_2 \\ & X0) \wedge (l1\_pre\_topc X0)))) \Rightarrow (\forall X1.((\neg v2\_struct\_0 X1) \wedge (m1\_pre\_topc \\ & X1 X0)) \Rightarrow (\forall X2.(m1\_subset\_1 X2 (u1\_struct\_0 X0)) \Rightarrow (\forall X3. \\ & (m1\_subset\_1 X3 (u1\_struct\_0 X0)) \Rightarrow (\forall X4.(m1\_subset\_1 X4 \\ & (u1\_struct\_0 X1)) \Rightarrow (\forall X5.(m1\_subset\_1 X5 (u1\_struct\_0 X1)) \Rightarrow \\ & (\forall X6.(m1\_borsuk\_2 X6 X0 X2 X3) \Rightarrow (((X2 = X4) \wedge ((X3 = X5) \wedge (r1\_tarski \\ & (k2\_relset\_1 (u1\_struct\_0 X0) X6) (u1\_struct\_0 X1)))) \Rightarrow ((r1\_borsuk\_6 \\ & X1 X4 X5) \wedge (m1\_borsuk\_2 X6 X1 X4 X5)))))))))) \end{aligned}$$